



WHO CARES: OPEN PIT MINING

MINING WASTE DUMP





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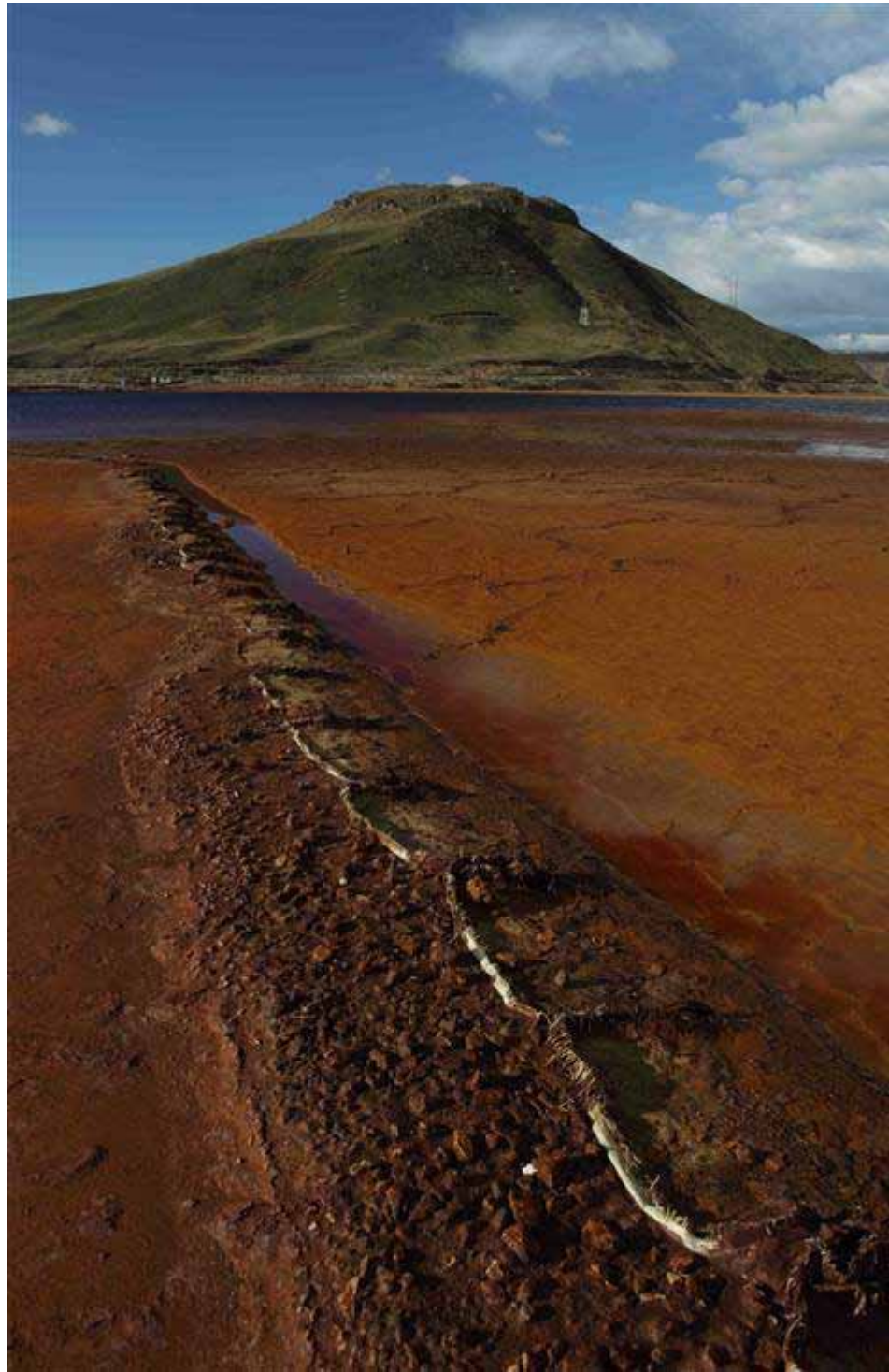
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10°41'30.71" S 76°17'14.07" W 2279 ft

elev 13997 ft

Aug 2007

Eye alt 20127 ft



ACID MINE DRAINAGE



CARELESS USE OF WATER AND DISPOSAL OF WASTE

EVALUATION METHODS

Table 1 The simple matrix for the identification of environmental impact in the area adjacent to Roşia de Jiu, Peşteana North and Peşteana South quarries.

No.	Activities / Operations	Geophysical environment				Biologic Environment		Socio-economic Indexes
		Soil	Air	Surface Waters	Ground Waters	Flora	Fauna	
	Direct Productive Activities							
1	Preparing the land for the mining activity	-3	-1	-3	-3	-3	-3	-3
2	Top soil removal	-3	0	-2	-3	-3	-3	0
3	Coal and waste excavation	-3	-2	0	-3	0	-3	-1
4	Waste and coal haulage – conveyor trajectory	-2	-2	0	0	-1	-1	0
5	Exterior waste pile formation	-3	-2	0	-1	-3	-3	-1
6	Interior waste pile formation	-1	-2	0	-3	0	-1	-1
7	Intermediate coal deposits	-2	-2	0	-2	0	0	-1
8	Central coal deposits	-2	-2	0	0	0	0	-1
9	Coal shipping – box car loading	-1	0	0	0	0	0	0
	Extra activities							
10	Thermal agent production inside quarries heating plants	-1	-2	0	0	0	0	1
11	Thermal agent production in Central heating plants for social consumption	-1	-2	0	0	0	0	1
12	Quarry water supply and waste water outlet	-1	0	-1	0	0	0	2
13	Social enclosures water supply and waste water outlet	-1	0	-1	0	0	0	2
14	Drainage works	-1	0	-3	-3	0	-1	1
Level 2 Value		-1.78	-1.21	-0.71	-1.28	-0.86	-1.07	-0.07

Table 2 Gpi values conversion scale in human effects on environmental quality

Gpi value	Activity effects on the environment
1	It is a natural environment, unaffected by human activity
1-2	The environment is affected by human activity within admissible limits
2-3	The environment is affected by human activity inducing a discomfort state to all life forms
3-4	The environment is affected inducing disturbances to all life forms
4-6	The environment is affected by human activity being dangerous for all life forms
> 6	The environment is degraded, unsuited to all life forms

GLOBAL POLLUTION INDEX

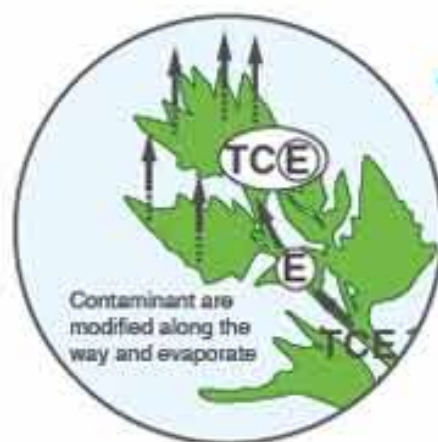
MATRIX METHOD

FALLEN INDUSTRIES AND ECONOMIES



PHYTO VOLATILIZATION:

Some plants take up volatile contaminants and release them into the atmosphere through transpiration. The contaminant is transformed or degraded within the plant to create a less toxic substance before and then released into the air.



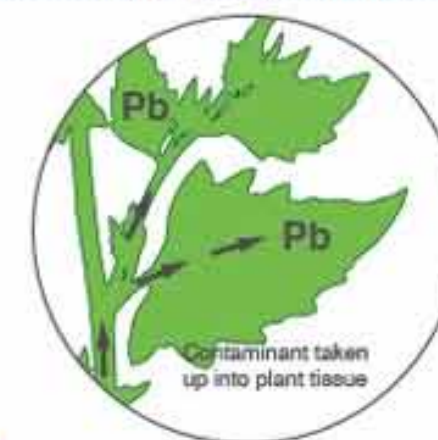
PHYTO DEGRADATION:

Plants take up and break down contaminants through the release of enzymes and metabolic processes such as photosynthetic oxidation/reduction. In this process organic pollutants are degraded and incorporated into the plant or broken down in the soil.



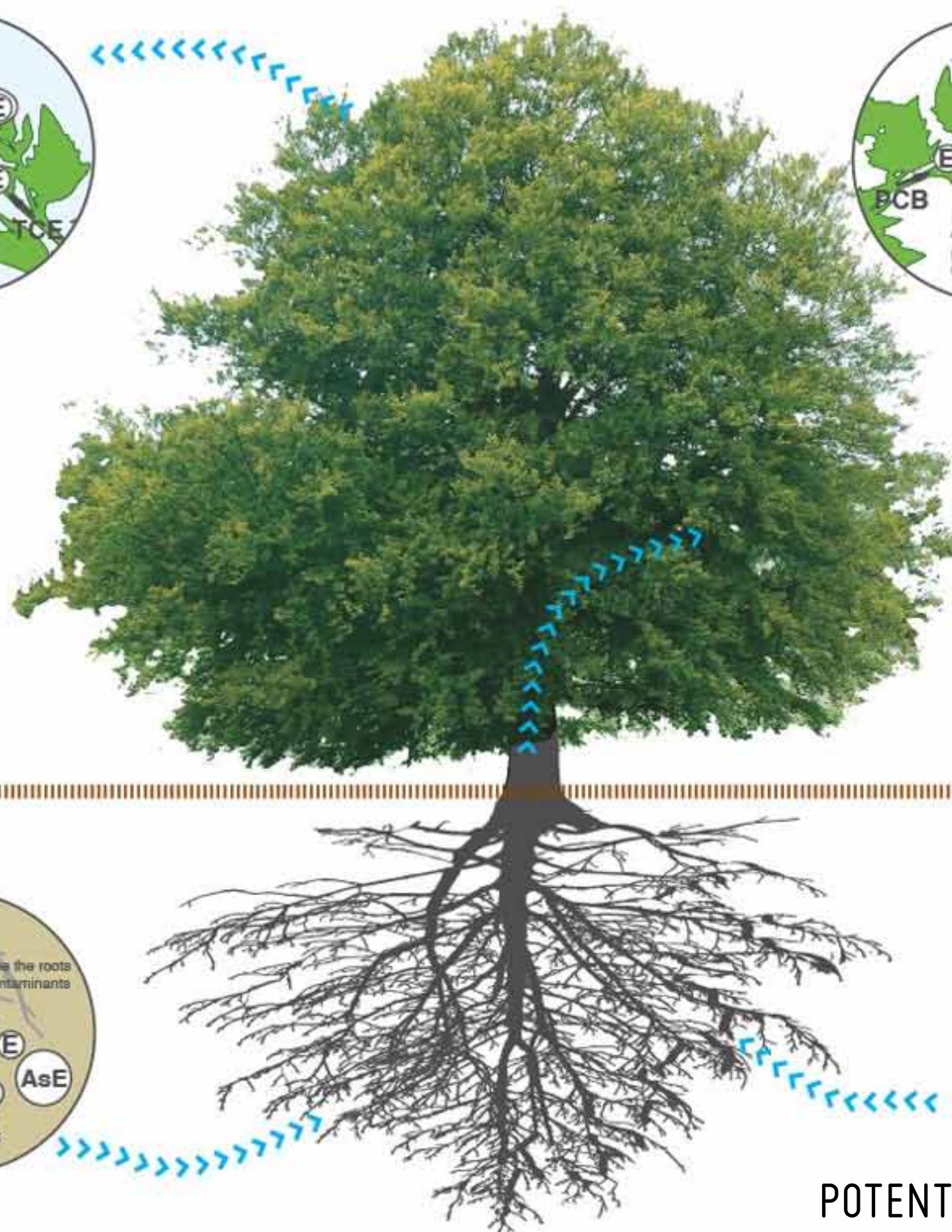
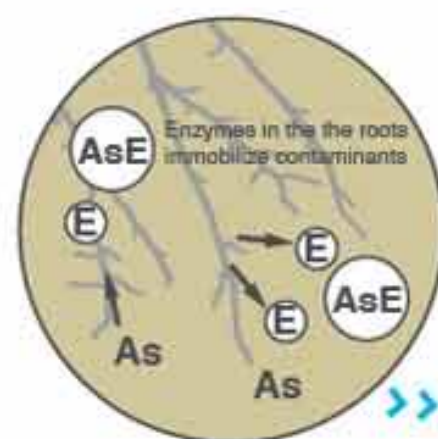
PHYTO EXTRACTION:

Plants take up contaminants - mostly metals, metaloids and radionucleids- with their roots and accumulate them in large quantities within their stems and leaves. These plants have to be harvested and disposed as special waste.



PHYTO STABILIZATION:

Some plants can sequester or immobilize contaminants by absorbing them into their roots and releasing a chemical that converts the contaminant to a less toxic state. This mechanism limits the migration of contaminants through water erosion, leaching, wind, and soil dispersion.



POTENTIAL OPTION: PHYTOREMEDIATION

PHYTOREMEDIATION CANALS

